

CLAIMS

1. A process for activating an hydrotreating catalyst comprising a Group
5 VIB metal oxide and a Group VIII metal oxide which process comprises
contacting the catalyst with an acid and an organic additive which has a
boiling point in the range of 80-500°C and a solubility in water of at least
5 grams per liter (20°C, atmospheric pressure), optionally followed by
drying under such conditions that at least 50 wt% of the additive is
10 maintained in the catalyst.
2. The process according to claim 1, wherein the activated hydrotreating
catalyst comprises a crystalline fraction (expressed as weight fraction of
crystalline compounds of Group VIB and Group VIII metals relative to
15 the total weight of the catalyst) below 5 wt%.
3. The process according to claim 1 or 2, wherein the activated
hydrotreating catalyst comprises substantially no crystalline fraction.
- 20 4. The process according to claim 1 to 3, wherein the hydrotreating
catalyst is a used hydrotreating catalyst which has been regenerated.
5. The process according to claim 1 to 3, wherein the hydrotreating
catalyst is a fresh hydrotreating catalyst.
- 25 6. The process according to claim 5, wherein the fresh hydrotreating
catalyst has been calcined.
7. The process according to claim 5 or 6, wherein the fresh hydrotreating
30 catalyst comprises a crystalline fraction of at least 0.5 wt %.

8. The process of claims 1 to 7, wherein the catalyst composition containing the acid is subjected to an aging step while wet.
9. The process according to claim 8, wherein the catalyst composition is
5 aged for a time sufficient to reduce the crystalline fraction below 5 wt%.
10. The process according to claim 1 to 9, wherein the acid concentration is at least 5 wt %, preferably at least 7 wt%, most preferably at least 10 wt % (relative to the total weight of the catalyst).
- 10 11. The process according to any one of the preceding claims wherein the acid is an inorganic acid, preferably a phosphorus-containing inorganic acid.
- 15 12. The process according to any one of the preceding claims wherein the acid is a carboxylic acid comprising at least one carboxylgroup and 1-20 carbon atoms.
13. The process according to claim 12 wherein the acid is citric acid.
- 20 14. The process according to any of the preceding claims wherein the additive is an organic oxygen- or nitrogen- containing compound, with a boiling point in the range of 100-400°C and a solubility in water of at least 5 grams per liter at room temperature (20°C) (atmospheric
25 pressure).
15. The process according to claim 14 wherein the additive is selected from the group of compounds comprising at least two hydroxyl groups and 2-10 carbon atoms per molecule, and the (poly)ethers of these
30 compounds.

16. The hydrotreating catalyst obtainable by the process according to claims 1 to 15
- 5 17. A hydrotreating catalyst comprising a Group VIII metal oxide and a Group VI metal oxide, which catalyst additionally comprises an acid and an organic additive which has a boiling point in the range of 80-500°C and a solubility in water of at least 5 grams per liter (20°C, atmospheric pressure).
- 10 18. The hydrotreating catalyst according to claim 16, wherein the catalyst is a regenerated used catalyst or a calcined fresh catalyst and wherein the catalyst comprises a crystalline fraction below 5 wt% (expressed as weight fraction of crystalline compounds of Group VIB and Group VIII
- 15 metals relative to the total weight of the catalyst).
19. A process for hydrotreating a hydrocarbon feed in which a hydrocarbon feed is contacted under hydrotreating conditions with a catalyst according to claim 10, which optionally has been (pre)sulfided before it
- 20 is contacted with the hydrocarbon feed.